

Fig. 1 C18:1 Frequencies for 92EF (WSGA 1A X Q0508)

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30
                                                 40
                         20
             10
  ATGGGTGCAGGTGGAAGAATGCAAGTGTCTCCTCCCA Fad2-D wt
  ATGGGTGCAGGTGGAAGAATGCAAGTGTCTCCTCCCA Fad2-D (GA316) IMC129
1
  ATGGGTGCAGGTGGAAGAATGCAAGTGTCTCCTCCCTCCA Fad2-F wt
٦
  ATGGGTGCAGGTGGAAGAATGCAAGTGTCTCCCTCCA Fad2-F (TA515) Q508
   ATGGGTGCAGGTGGAAGAATGCAAGTGTCTCCTCCCTCCA Fad2-F (GA908) Q4275
                                                 80
                                     70
                         60
             50
  AAAAGTCTGAAACCGACAACATCAAGCGCGTACCCTGCGA Fad2-D wt
41
   AAAAGTCTGAAACCGACAACATCAAGCGCGTACCCTGCGA Fad2-D (GA316) IMC129
41
   AGAAGICTGAAACCGACCATCAAGCGCGTACCCTGCGA Fad2-F wt
41
   AGAAGTCTGAAACCGACACCATCAAGCGCGTACCCTGCGA Fad2-F (TA515) Q508
41
   AGAAGTETGAAAEEGAEACEATEAAGEGGGTAEEETGEGA Fad2-F (GA908) Q4275
41
                                                 120
                                     110
                         100
             90
   GACACCGCCTTCACTGTCGGAGAACTCAAGAAAGCAATC Fad2-D wt
81
   GACACCGCCCTTCACTGTCGGAGAACTCAAGAAAGCAATC Fad2-D (GA316) IMC129
   GACACCGCCCTTCACTGTCGGAGAACTCAAGAAAGCAATC Fad2-F wt
81
   GACACCGCCTTCACTGTCGGAGAACTCAAGAAGCAATC Fad2-F (TA515) Q508
   GACACCGCCCTTCACTGTCGGAGAACTCAAGAAAGCAATC Fad2-F (GA908) Q4275
                                     150
                                                 160
             130
                         140
   CCACCGCACTGTTTCAAACGCTCGATCCCTCGCTCTTTCT Fad2 D wt
   CCACCGCACTGTTTCAAACGCTCGATCCCTCGCTCTTTCT Fad2-D (GA316) IMC129
  CCACCGCACTGTTTCAAACGCTCGATCCCTCGCTCTTTCT Fad2-F wt
12 CCACCGCACTGTTTCAAACGCTCGATCCCTCGCTCTTTCT Fad2-F (TA515) Q508
  CCACCGCACTGTTTCAAACGCTCGATCCCTCGCTCTTTCT Fad2 F (GA908) Q4275
                                                 200
                                     190
                         180
             170
 14
161 CCTACCTCATCTGGGACATCATCATAGCCTCCTGCTTCTA Fad2-D wt
  CCTACCTCATCTGGGACATCATCATAGCCTCCTGCTTCTA Fad2-D (GA316) TMC129
E CCTACCTCATCTGGGACATCATCATAGCCTCCTGCTTCTA Fad2-P wt
E CCTACCTCATCTGGGACATCATCATAGCCTCCTGCTTCTA Fad2-F (TA515) Q508
161 CCTACCTCATCTGGGACATCATCATAGCCTCCTGCTTCTA Fad2-F (GA908) Q4275
                                                 240
                                     230
                         220
             210
   CTACGTCGCCACCACTTACTTCCCTCTCCCTCACCCT Fad2-D wt
201
   CTACGTCGCCACCACTTACTTCCCTCTCCTCACCCT Fad2-D (GA316) IMC129
201 CTACGTCGCCACCACTTACTTCCCTCTCCCTCACCCT Fad2-F wt
201 CTACGTCGCCACCACTTACTTCCCTCTCCCTCACCCT FAdZ-F (TA515) Q508
201 CTACGTCGCCACCACTTACTTCCCTCTCCCCCCTCACCCT Fad2-F (GA908) Q4275
                                                 280
                                      270
              250
                          260
241 CTCTCCTACTTCGCCTGGCCTCTCTACTGGGCCTGCCAGG Fad2-D wt
241 CTCTCCTACTTCGCCTGGCCTCTCTACTGGGCCTGCCAGG Fad2-D (GA316) IMC129
241 CTCTCCTACTTCGCCTGGCCTCTCTACTGGGCCTGCCAAG Fad2-F wt
241 CTCTCCTACTTCGCCTGGCCTCTCTACTGGGCCTGCCAAG Fad2-F (TA515) Q508
 241 CTCTCCTACTTCCCCTGGCCTCTCTACTGGGCCTGCCAAG Fad2-F (GA908) Q4275
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320
           290
                      300
                                310
281 GCTGCGTCCTAACCGGCGTCTGGGTCATAGCCCACCGGTG Fad2-D wt
281 GCTGCGTCCTAACCGGCGTCTGGGTCATAGCCCACAAGTG Fad2-D (GA316) IMC129
281 GGTGCGTCCTAACCGGCGTCTGGGTCATAGCCCCACGAGTG Fad2-F wt
281 GGTGCGTCCTAACCCGCGTCTGGGTCATAGCCCACGAGTG Fad2-F (TA515) Q508
  GGTGCGTCCTAACCGGCGTCTGGGTCATAGCCCACGAGTG Yad2-F (GA908) Q4275
                                           360
                                350
           330
                      340
321 CGGCCACCACGCCTTCAGCGACTACCAGTGGCTGGACGAC Fad2-D wt
321 CGGCCACCACGCCTTCAGCGACTACCAGTGGCTGCACGAC Fad2-D (GA316) IMC129
321 CGGCCACCACGCCTTCAGCGACTACCAGTGGCTTGACGAC Fad2-F wt
321 CGGCCACCACGCCTTCAGCGACTACCAGTGGCTTGACGAC Fad2-F (TA515) Q508
321 CGGCCACCACGCCTTCAGCGACTACCAGTGCCTTGACGAC Fad2-F (GA908) Q4275
                                           400
           370
                      380
                                390
361 ACCGTCGGCCTCATCTTCCACTCCTTCCTCCTCGTCCCTT Fad2-D wt
361 ACCGTCGGCCTCATCTTCCACTCCTTCCTCCTCGTCCCTT FAd2-D (GA316) IMC129
361 ACCGTCGGTCTCATCTTCCACTCCTTCCTCCTCGTCCCTT Fad2. F wt
361 ACCGTCGGTCTCATCTTCCACTCCTTCCTCCTCCCTT Fad2-F (TA515) Q508
361 ACCGTCGGTCTCATCTTCCACTCCTTCCTCGTCCCTT Fad2-F (GA908) 04275
                                430
                                           140
                      420
           410
7
  ACTTCTCCTGGAAGTACAGTCATCGACGCCACCATTCCAA Fad2-D wt
40.1
  ACTICICCIGGAAGIACAGICAICGACGCCACCAIICCAA Fad2-D (GA316) IMC129
404 ACTICICCICGAAGTACAGICATCGACGCCACCATICCAA Fad2-F wt
  ACTTCTCCTGGAAGTACAGTCATCGACGCCACCATTCCAA Fad2-F (TA515) Q508
  ACTICICCIGGAAGTACAGTCATCGACGCCACCATICCAA Fad2-F (GA908) Q4275
401
                                           480
                                 470
                      460
            150
  CACTGGCTCCCTCGAGAGAGACGAAGTGTTTGTCCCCAAG Fad2-D wt
  CACTGGCTCCCTCGAGAGAGAGGAGTGTTTGTCCCCAAG Fad2-D (GA316) IMC129
  CACTGGCTCCCTCGAGAGAGACGAAGTGTTTGTCCCCAAG Fad?-F wt.
441
CACTGGCTCCCTCGAGAGAGACGAAGTGTTTGTCCCCAAG Fad2-r (TA515) Q508
641 CACTGGCTCCCTCGAGAGAGACGAAGTGTTTCTCCCCAAG Fad2-F (GA908) Q4275
                                           520
                                 510
           . 490
                      500
481 AAGAAGTCAGACATCAAGTGGTACGGCAAGTACCTCAACA Fad2-D wt
481 AAGAAGTCAGACATCAAGTGGTACGCCAAGTACCTCAACA Fad2-D (GA316) IMC129
481 AAGNAGTCAGACATCAAGTGGTACGGCAAGTACCTCAACA Fad2-F wt
481 AAGAAGTCAGACATCAAGTGGTACGGCAAGTACCACAACA Fad2-F (TA515) Q508
481 AAGAAGTCAGACATCAAGTGGTACGGCAAGTACCTCAACA Fad2 F (GA908) Q4275
                                           560
                                 550
                      540
            530
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600
                                     590
             570
                         580
  TCTCGGCTGGCCTTTGTACTTAGCCTTCAACGTCTCGGGG FAd2-D wt
  TOTOGGOTGGOOTTTGTACTTAGCOTTCAACGTCTCGGGG Fad2-D (GA316) IMC129
  TOTOGGOTGGOOGTTGTACTTAGCCTTCAACGTCTCGGGA Fad2-F wt
561 TOTOGGOTGGOOGTTGTACTTAGUUTTUAACGTCTCGGGA Fad2-F (TA515) Q508
561 TOTOGGOTGGOCGTTGTACTTAGCCTTCAACGTCTCGGGA Fad2-F (GA908) Q42/5
                                     630
                                                 640
                         620
             610
601 AGACCTTACGACGGCGCTTCGCTTGCCATTTCCACCCCA FAd2-D WE
601 AGACCTTACGACGGCGGCTTCGCTTGCCATTTCCACCCCA Fad2-D (GA316) IMC129
601 AGACCTTACGACGGCGGCTTCGCTTGCCATTTCCACCCCA Fad2-F wt.
601 AGACCTTACGACGGCGGCTTCGCTTGCCATTTCCACCCCA Fad2-F (TA515) Q508
601 AGACCITACGACGGCGGCTTCGCTTGCCATTTCCACCCCA Fad2-F (GA908) Q4275
                                                 680
                                     670
                         660
             650
641 ACGCTCCCATCTACAACGACCGTGAGCGTCTCCAGATATA Fad2-D wt
641 ACGCTCCCATCTACAACGACCGTGAGCGTCTCCAGATATA Fad2-b (GA316) IMC129
641 ACGCTCCCATCTACAACGACCGCGAGCGTCTCCAGATATA Fad2-F wt
641 ACGCTCCCATCTACAACGACCGCCAGCGTCTCCAGATATA Fad2-F (TA515) Q508
  ACGCTCCCATCTACAACGACCGCGAGCGTCTCCAGATATA Fad2-F (GA908) Q4275
 4D
 A. Carrie
                                                 720
                         700
                                     710
             690
 CATCTCCGACGCTGGCATCCTCGCCGTCTGCTACGGTCTC Fad2-D wt
   CATCTCCGACGCTGGCATCCTCGCCGTCTGCTACGGTCTC Fad2-D (GA316) IMC129
   CATCTCCGACGCTGGCATCCTCGCCGTCTGCTACGGTCTC Fad2-F wt.
  CATCTCCGACGCTGGCATCCTCGCCGTCTGCTACGGTCTC Fad2-F (TA515) Q508
   CATCTCCGACGCTGGCATCCTCGCCGTCTGCTACGGTCTC Fad2-F (GA908) Q4275
                                                 760
                                     750
             730
                         740
 TAUCGUTAUGUTGUTGTCCAACGAGTTGCCTCGATGGTCT Fad2-D wt
TACCGCTACGCTGCTGTCCAAGGAGTTCCCTCCATCGTCT Fad2-D (GA316) IMC129
TTCCGTTACGCCGCCGCGCAGGGAGTGGCCTCGATGGTCT Fad2-P wt
   TTCCGTTACGCCGCCGCAGGGAGTGGCCTCGATGCTCT Fad2-F (TA515) Q508
   TTCCGTTACGCCGCGCGCGCAGGGGCCTCGATGGTCT Fad2-F (GA908) Q4275
                                                 800
                                      790
                          780
              770
761 GCTTCTACGGAGTTCCTCTTCTGATTGTCAACGGGTTCTT Fad2-D wt
761 GCTTCTACGCAGTTCCTCTTCTGATTGTCAACGGGTTCTT Fad2-D (GA316) IMC129
   GCTTCTACGGAGTCCCGCTTCTGATTGTCAATGGTTTCCT Fad2-f wt
   GCTTCTACGGAGTCCCGCTTCTCATTGTCAATGGTTTCCT Fad2-F (TA515) Q508
   GCTTCTACGGAGTCCCGCTTCTGATTGTCAATGGTTTCCT Fad2-F (GA908) Q4275
                                                  840
                                      830
                          820
              810
 801 AGTTTTGATCACTTACTTGCAGCACACGCATCCTTCCCTG Fad2-D wt
 801 AGTTTTGATCACTTACTTGCAGCACACGCATCCTTCCCTG Fad2-D (GA316) IMC129
   CGTGTTGATCACTTGCAGCACACGCATCCTTCCCTG Fad2-F wt
   CGTGTTGATCACTTGCACCACACGCATCCTTCCCTG Fad2-F (TA515) Q508
   ССТСТТСАТСАСТТАСТТССАССАСССАТССТТСССТС Fad2-F (GA908) Q4275
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880
                                     870
                         860
             850
  CCTCACTATGACTCGTCTGAGTGGGATTGGTTGAGGGGAG Fad2-D wt
841
  CCTCACTATGACTCGTCTGAGTGGGATTGGTTGAGGGGAG Fad2-D (GA316) IMC129
  CCTCACTACGATTCGTCCGAGTGGGATTGGTTGAGGGGAG Fad2-F wt
  CCTCACTACGATTCCTCCCACTCCGATTCGTTCAGGGCAG FAd2-F (TA515) Q508
  CCTCACTACGATTCGTCCGAGTGGGATTGGTTGAGGGGAG FAd2-F (GA908) Q4275
                                                  920
                                      910
                         900
             890
881 CTTTGGCCACCGTTGACAGAGACTACCGAATCTTGAACAA Fad2-D wt
881 CTTTGGCCACCGTTGACAGAGACTACGGAATCTTGAACAA FAd2 D (GA316) IMC129
  CTTTGGCTACCGTTGACAGAGACTACGGAATCTTGAACAA Fad2-F wt
  CTTTGGCTACCGTTGACAGAGACTACGGAATCTTGAACAA Fad2-F (TA515) Q508
881 CTTTGGCTACCGTTGACAGAGACTACGAAATCTTGAACAA Fad2-F (GA908) Q4275
                                                  960
                                      950
                          940
             930
  GGTCTTCCACAATATCACGGACACGCACGTGGCGCATCAC Fad2-D wt
921
921 GGTCTTCCACAATATCACGGACACGCACGTGGCGCATCAC Fad2-D (GA316) IMC129
921 GGTCTTCCACAATATTACCGACACGCACGTGGCGCATCAT Fad2-F wt
921 GGTCTTCCACAATATTACCGACACGCACGTGGCGCATCAT Fad2-F (TA515) Q508
   GGTCTTCCACAATATTACCGACACGCACGTGGCGCATCAT Fad2-F (GA908) Q4275
921
 ű
                                                  1000
                                      990
                          980
              970
 CTGTTCTCGACCATGCCGCATTATCATGCGATGGAAGCTA Fad2-D wt
961 CTGTTCTCGACCATGCCGCATTATCATGCGATGGAAGCTA Fad2-D (GA316) IMC129
96 CTGTTCTCCACGATGCCGCATTATCACGCGATGGAAGCTA Fad2-F wt
951 CIGITCICCACGAIGCCGCAITAICACGCGAIGGAAGCIA Fad2-F (TA515) Q508
   CTGTTCTCCACGATGCCGCATTATCACGCGATGGAAGCTA Fad2-F (GA908) Q4275
961
                                                  1040
                          1020
                                      1030
             1010
1001 CGAAGGCGATAAAGCCGATACTGGGAGAGTATTATCAGTT Pad2 D wt
1001 CGAAGGCGATAAAGCCGATACTGGGAGAGTATTATCAGTT Fad2-D (GA316) IMC129
1001 CCAAGGCGATAAAGCCGATACTGGGAGAGTATTATCAGTT Fad2-F wt
1901 CCAAGGCGATAAAGCCGATACTGGGAGAGTATTATCAGTT Fad2-F (TA515) Q508
1001 CCAAGGCGATAAAGCCGATACTGGCAGAGTATTATCAGTT Fad2-F (GA908) Q4275
                                                  1080
                                      1070
                          1060
              1050
1041 CGATGGGACGCCGGTGGTTAAGGCGATGTGGAGGGAGGCG Fad2-D wt
1041 CCATGGGACGCCCGTGGTTAAGGCGATGTGGAGGGAGGCG Fad2-D (GA316) IMC129
1041 CGATGGGACGCCGGTGGTTAAGGCGATGTGGAGGGAGGCG Fad2-F wt
1041 CGATGGGACGCCGGTGGTTAAGGCGATGTGGAGGGAGGCG Fad2-F (TA515) Q508
1041 CGATGGGACGCCGGTGGTTAAGGCGATGTGGAGGGAGGCG Fad2-F (GA908) Q4275
                                                  1120
                                      1110
                          1100
              1090
 1081 AAGGAGTGTATCTATGTGGAACCGGACAGGCAAGGTGAGA Fad2-D wt
 1081 AAGGAGTGTATCTATGTGCAACCCGACAGGCAAGGTGAGA Fad2-D (GA316) IMC129
 1081 AAGGAGTGTATCTATGTGGAACCGGACAGGCAAGGTGAGA Fad2-F wt
 1081 AAGGAGTGTATCTATGTGGAACCGGACAGGCAAGGTGAGA Fad2-F (TA515) Q508
 1081 AAGGAGTGTATCTATGTGGAACCGGACAGGCAAGGTGAGA Fad2-F (GA908) 04275
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1130 1140 1150

1121 AGAAAGGTGTGTTCTGGTACAACAATAAGTTATCA
1121 AGAAAGGTGTGTTCTGGTACAACAATAAGTTATGA
1121 AGAAAGGTGTGTTCTGGTACAACAATAAGTTATGA
1121 AGAAAGGTGTGTTCTGGTACAACAATAAGTTATGA
1121 AGAAAGGTGTGTTCTGGTACAACAATAAGTTATGA

Fad2-D wt Fad2-D (GA316) TMC129 Fad2-F wt Fad2-F (TA515) Q508 Fad2-F (GA908) Q4275

FIG. 2E

	10	20		
	1 Day Son Fun Tun Son Glu Thr	Aan Aan	Fad2-D wt	
1	Met Gly Ala Gly Gly Arg Met Gln Val Ser Pro Pro Ser Lys Lys Ser Glu Thr Met Gly Ala Gly Gly Arg Met Gln Val Ser Pro Pro Ser Lys Lys Ser Glu Thr	Asp Asn	Fad2-D (GA316)	TMC129
1	Met Gly Ala Gly Gly Arg Met Gln Val Ser Pro Pro Ser Lys Lys Ser Glu Thr Met Gly Ala Gly Gly Arg Met Gln Val Ser Pro Pro Ser Lys Lys Ser Glu Thr	Asp Thr	Fad2 F wt	
1	Met Gly Ala Gly Gly Arg Met Gln Val Ser Pro Pro Ser Lys Lys Ser Glu Thr Met Gly Ala Gly Gly Arg Met Gln Val Ser Pro Pro Ser Lys Lys Ser Glu Thr	Asp Thr	Fad2-F (TA515)	Q508
1	Met Gly Ala Gly Gly Arg Met Gln Val Ser Pro Pro Ser Lys Lys Ser Glu Thr	Asp Thr	Fad2-F (GA908)	Q4275
1	Met Gly Ala Gly Gly Ard Mar Gill val bor 110 110 out and and	•		
		40		
	30	40		
61	Ile Lys Arg Val Pro Cys Glu Thr Pro Pro Phe Thr Val Gly Glu Leu Lys Lys	AlaIle	Fad2-D wt	
61	The Tue Arg Wal Pro Cvs Glu Thir Pro Pro Phe Thir Val Gly Glu Leu Lys Lys	Ala ile	: 402-0 (GA310)	IMC129
61	The Pro Pro Pro Phe The Val Gly Glu Leu Lys Lys	ALR ITE	radz-r wc	
61	The Pro Cya Clu The Pro Pro Phe The Val Gly Clu Leu Lys Lys	Ala He	EMOS-E (IVETE)	04375
61	Ile Lys Arg Val Pro Cys Glu Thr Pro Pro Phe Thr Val Gly Glu Leu Lys Lys	Ala Ile	ESGN-R (GWS00)	Q4273
		<del></del>		
	50	60		
	Pro Pro His Cys Phe Lys Arg Ser Ile Pro Arg Ser Phe Ser Tyr Leu Ile Trp	Asp Tle	Fad2-D wt	
121	Pro Pro His Cys Phe Lys Arg Ser lie Pro Arg Ser Phe Ser Tyr Leu Ile Trp Pro Pro His Cys Phe Lys Arg Scr Ile Pro Arg Ser Phe Ser Tyr Leu Ile Trp	Asp Ile	Fad2-D (GA316)	TMC129
121	Pro Pro His Cys Phe Lys Arg Ser Ile Pro Arg Ser Phe Ser Tyr Leu Ile Trp	Asp Ile	Fad2-F wt	
121	Pro Pro His Cys Phe Lys Arg Ser Ile Pro Arg Ser Phe Ser Tyr Leu Ile Trp	Asp Ilc	Fad2-F (TA515)	Q508
121	Pro Pro His Cys Phe Lys Arg Ser Ile Pro Arg Ser Phe Ser Tyr Leu Ile Trp	Asp Ile	Fad2-F (GA908)	Q4275
121	PIO PIO NIS CYS FILE INS MIG DOL 120 DOL 120		_	
Ī		80		
	70		-	
181	Ile Ile Ala Ser Cys Phe Tyr Tyr Val Ala Thr Thr Tyr Phe Pro Leu Leu Pro	His Pro	Fad2-D wt	#\*#1.00
181	The Tie Die Ser Cus Dhe Tur Tur Val Ala Thr Thr Tyr Phe Pro Leu Leu Pro	HT2 FLO	FAGS-D (GIGITO)	IMC129
184	d d d b Two Two Val bla Thr Thr Tvr Phe Pro Leu Leu Pro	HIS PIO	EAGZ-E PL	
181	The The Tank of the Mark The Val Ala The The Tyr Phe Pro Leu Leu Kro	HTA ETH	L407 F (15717)	04275
181	Ile Ile Ala Ser Cys Phe Tyr Tyr Val Ala Thr Thr Tyr Phe Pro Leu Leu Pro	nis Pro	radz-r (droot)	412.5
ā		Т.	-	
manufaction of the second of t	90	100	<b>)</b>	
	Leu Ser Tyr Phe Ala Trp Pro Leu Tyr Trp Ala Cys Gln Gly Cys Val Leu Th	Glv Val	Fad2-D wt	
241	Leu Ser Tyr Phe Ala Trp Pro Leu Tyr Trp Ala Cys Gln Gly Cys Val Leu The Leu Ser Tyr Phe Ala Trp Pro Leu Tyr Trp Ala Cys Gln Gly Cys Val Leu Th	Gly Val	Fad2-D (GA316)	IMC129
241	The big the two the Ten Ala Cus Gly Gly Cus Val hell Till	L MIN AWT	. Estab-r we	
241	as as an an area from the man his five fell billion val bell ID.	C GTA A 4T	. Fame - I trans-	Q508
241	Leu Ser Tyr Phe Ala Trp Pro Leu Tyr Trp Ala Cys Gin Gly Cys Val Leu Th	Gly Val	. Fad2-F (GA908	Q4275
241	Ted 2et 1 At the way 1. b = 1 and 1. b = 1			
		120	3	
	110			
301	Trp Val Ile Ala His Glu Cys Gly His His Ala Phe Ser Asp Tyr Gln Trp Le	u Asp Asi	Fad2-D wt	1 700120
301	was the Ala Wie Lue Cue Glu His His Ala Phe Ser Asp Tyr Gln Trp Le	n wab wak	Fadz-D (Grata	) IMC129
301		a vab vai	S FAGE-F WO	
301	and the second of the second o	u asp asp	S FACE / LAGIS	1 04275
301		u Asp Asp	2 LUGS-E LOUISAG	, 230,0
			-	
	130	14	0	
	Thr Val Gly Leu Ile Phe His Ser Phe Leu Leu Val Pro Tyr Phe Ser Trp Ty	a Tvr Sei	— r Fad2-D wt	
361		s Tyr Se	r Fad2-D (GA316	) IMC129
36:		P TAL DE	f taut t ac	•
361		3 TYL SE.	r rauz-r (170016	() Q508
36:	The second of the second plantage of the Tay Tay Val Pro Tur Pho Sci Tip My	s Tyr Se	r Fad2 F (GA908	) Q4275
361	I THE VALUE OLY MAN AND THE STATE OF THE STA			

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150
                                                                               160
421 His Arg Arg His His Ser Asn Thr Gly Ser Leu Glu Arg Asp Glu Val Phe Val Pro Lys Fad2-D wt
421 His Arg Arg His His Ser Asn Thr Gly Ser Leu Glu Arg Asp Glu Val Phe Val Pro Lys Fad2-D (GA316) IMC129
421 His Arg Arg His His Ser Asn Thr Gly Ser Leu Glu Arg Asp Glu Val Phe Val Pro Lys Fad2-F wt
421 His Arg Arg His His Ser Asn Thr Gly Ser Leu Glu Arg Asp Glu Val Phe Val Pro Lys Fad2-F (TA515) Q508
421 His Arg Arg His His Ser Asn Thr Gly Ser Leu Glu Arg Asp Glu Val Phe Val Pro Lys Fad2-F (GA908) 04275
                                        170
                                                                               180
481 Lys Lys Ser Asp Ile Lys Trp Tyr Gly Lys Tyr Leu Asn Asn Pro Leu Gly Arg Thr Val Fad2-D wt
481 Lys Lys Ser Asp Ile Lys Trp Tyr Gly Lys Tyr Leu Ash Ash Pro Leu Gly Arg Thr Vai Fad2-D (GA316) 1MC129
481 Lys Lys Ser Asp Ile Lys Trp Tyr Gly Lys Tyr Leu Asn Asn Pro Leu Gly Arg Thr Val Fad2-F wt.
481 Lys Lys Ser Asp Ile Lys Trp Tyr Gly Lys Tyr His Asn Asn Pro Leu Gly Arg Thr Val Fad2-F (TA515) Q508
481 Lys Lys Ser Asp Ile Lys Trp Tyr Gly Lys Tyr Leu Asn Asn Pro Leu Gly Arg Thr Val Fad2-F (GA908) Q4275
                                        190
                                                                               200
541 Met Leu Thr Val Gln Phe Thr Leu Gly Trp Pro Leu Tyr Leu Ala Phe Asn Val Ser Gly Fad2-D wt
541 Met Leu Thr Val Gln Phe Thr Leu Gly Top Pro Leu Tyr Leu Ala Phe Asn Val Ser Gly Fad2-D (CA316) IMCl29
541 Met Leu Thr Val Gln Phe Thr Leu Gly Trp Pro Leu Tyr Leu Ala Phe Asn Val Ser Gly Fad2-F wt
541 Met Leu The Val Gln Phe The Leu Gly Trp Pro Leu Tyr Leu Ala Phe Asn Val Ser Gly Fad2-F (TA515) Q508
541 Met Leu Thr Val Gln Phe Thr Leu Gly Trp Pro Leu Tyr Leu Ala Phe Asn Val Ser Gly Fad2-P (GA908) Q4275
 Ţ.
                                                                               220
                                        210
60 Arg Pro Tyr Asp Gly Gly Phe Ala Cys His Phe His Pro Asn Ala Pro Ile Tyr Asn Asp Fad2-D wt
604 Arg Pro Tyr Asp Gly Gly Phe Ala Cys His Phe His Pro Asm Ala Pro Ile Tyr Asm Asp Fad2-D (GA316) IMC129
601 Arg Pro Tyr Asp Gly Gly Phe Ala Cys His Phe His Pro Asn Ala Pro 11c Tyr Asn Asp Fad2-F wt
651 Arg Pro Tyr Asp Gly Gly Phe Ala Cys His Phe His Pro Asn Ala Pro Ile Tyr Asn Asp Fad2 F (TA515) Q508
601 Arg Pro Tyr Asp Gly Gly Phe Ala Cys His Phe His Pro Asn Ala Pro Ile Tyr Asn Asp Fad2-F (GA908) Q4275
                                                                               240
                                        230
📆 Arg Glu Arg Leu Gln Ile Tyr Ile Ser Asp Ala Gly Ile Leu Ala Val Cys Tyr Gly Leu Fad2-D wt
661 Arg Glu Arg Leu Gln Ile Tyr Ile Ser Asp Ala Cly Ile Leu Ala Val Cys Tyr Cly Leu Fad2-D (GA316) IMCl29
🍪 Arg Glu Arg Leu Gln Ile Tyr Ile Ser Asp Ala Gly Ile Leu Ala Val Cys Tyr Gly Leu Fad2-F wt
😥 Arg Glu Arg Leu Gln Ile Tyr Ile Ser Asp Ala Gly Ile Leu Ala Val Cys Tyr Gly Leu Fad2-F (TA515) Q508
661 Arg Glu Arg Leu Gln Ile Tyr Ile Ser Asp Ala Gly Ile Leu Ala Val Cys Tyr Gly Leu Fad2-F (GA908) Q4275
                                        250
                                                                               260
721 Tyr Arg Tyr Ala Ala Val Gln Gly Val Ala Ser Met Val Cys Phe Tyr Gly Val Pro Leu Fad2 D wt
721 Tyr Arg Tyr Ala Ala Val Gln Gly Val Ala Ser Met Val Cys Phe Tyr Gly Val Pro Leu Fad2-D (GA316) IMC129
721 Phe Arg Tyr Ala Ala Ala Gln Cly Val Ala Sac Mat Val Cys Phe Tyr Gly Val Pro Leu Fad2-F wt
721 Phe Arg Tyr Ala Ala Ala Gln Gly Val Ala Ser Met Val Cys Phe Tyr Gly Val Pro Leu Fad2-F (TA515) Q508
721 Phe Arg Tyr Ala Ala Ala Gln Gly Val Ala Ser Met Val Cys Phe Tyr Gly Val Pro Leu Fad2 F (GA908) Q4275
                                        270
                                                                               280
781 Lau Ile Val Ash Gly Phe Leu Val Leu Ile Thr Tyr Leu Gln His Thr His Pro Ser Leu Fad2-D wt
781 Leu Ile Val Asn Gly Phe Leu Val Leu Ile Thr Tyr Leu Gln His Thr His Pro Ser Leu Fad2-D (GA316) 1MC129
781 Leu Ile Val Asn Gly Phe Leu Val Leu Ile Thr Tyr Leu Gln His Thr His Pro Ser Leu rad2-F wt
781 Leu Ile Val Ash Gly Phe Leu Val Lau Ile Thr Tyr Leu Gln His Thr His Pro Ser Leu Fad2-F (TA515) Q508
78] Leu Ile Val Asn Gly Phe Leu Val Leu Ile Thr Tyr Leu Gln His Thr His Pro Scr Leu Fad2-F (GA908) Q4275
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		<u> </u>	·
		290	300
	Day Min Bur Son Con (2) 11 Tron 1	Asp Trp Leu Arg Gly Ala Leu Ala Thr	Val Asp Arg Fad2-D wt
	pro his tyr Asp ser ser Glu Tro I	Asp Trp Lou Arg Glv Ala Leu Ala Thr	Val Asp Arg Fad2-D (GA316) IMC129
841	pro his Tyl Asp Ser Ser Glu Tro	Asp Trp Leu Arg Gly Ala Leu Ala Thr	Val Asp Arg Fad2-F wt
841	nes wis Tur Asp Ser Ser Glu Tro	Asp Trp Leu Arg Gly Ala Leu Ala Thr	Val Asp Arg Fad2-F (TA515) Q508
841	pro his Tyr Asp Ser Ser Glu Tro	Asp Trp Leu Arg Gly Ala Leu Ala Thr	Val Asp Arg Fad2-F (GA908) Q4275
841	hig with the wash set set our ith.	<b>DF 12F</b> 212111, 117	
		310	320
901	Asp Tyr Gly Ile Leu Asn Lys Val	Phe His Asn Ile Thr Asp Thr His Val	Ala His His Fad2-D wt
901	Asp Tyr Gly Ile Leu Asn Lys Val	he His Ash Ile Thr Asp Thr His Val.	Ala His His Fad2-D (GA316) IMC129
901	Asp Tyr Gly Ile Leu Ash Lys Val	Phe His Asn Ilc Thr Asp Thr His Val.	Ala His His Fad2-P wt
901	Asp Tyr Gly Ile Leu Asn Lys Val	Pho His Asn Ile Thr Asp Thr His Val.	Ala His His Fad2-F (TAS15) Q508
901	Asp Tyr Glu Ile Leu Asn Lys Val	Phe His Asn Ile Thr Asp Thr His Val	Ala His His Fad2-F (CA908) Q4275
		330	340
		. 1	
961	Leu Phe Ser Thr Met Pro His Tyr	His Ala Met Glu Ala Thr Lys Ala Ile	MAS PRO ITE FACE-D WE
961	Leu Phe Ser Thr Met Fro His Tyr	His Ala Met Glu Ala Thr Lys Ala lie	Lys Pro Ile Fad2-D (GA316) IMC129
961	Leu Phe Ser Thr Met Pro His Tyr	His Ala Met Glu Ala Thr Lys Ala Ile His Ala Met Glu Ala Thr Lys Ala Ilc	Tue Pro Tie Fad2 F (TAS15) US08
961	Leu Phe Ser Thr Met Pro His Tyr	His Ala Met Glu Ala Thr Lys Ala Ile	Lus Pro (le Fad2-F (GA908) 04275
961 	Leu Phe Ser Thr Met Pro his Tyr	MIS ALL MEE GIG ALL III GYN ALL III	
		350	360
102	Leu Gly Glu Tyr Tyr Gln Phe Asp	Gly Thr Pro Val Val Lys Ala Met Trp	Arg Glu Ala Fad2-D wt
162	1 Leu Gly Glu Tyr Tyr Gln Phe Asp	Gly Thr Pro Val Val Lys Ala Met Trp	Arg Glu Ala Fad2-D (GA316) IMC129
1000	Leu Gly Glu Tyr Tyr Gln Phe Asp	Gly Thr Pro Val Val Lys Ala Met Trp	Arg Glu Ala Fad2-F WC
10.7	1 Leu Gly Glu Tyr Tyr Gln Phe Asp	Gly Thr Pro Val Val Lys Ala Met Trp	Arg Glu Ala Fad2-F (TA515) Q508
102	l Leu Gly Glu Tyr Tyr Gln Phe Asp	Gly Thr Pro Val Val Lys Ala Met Trp	Arg Glu Ala Fad2-F (GA908) Q4275
=====			
		370	380
		Asp Arg Gln Gly Glu Lys Lys Gly Val	Phe Trp Tyr Fad2-D wt
188	I has con the the various to	Asp Arg Gln Glv Glu Lvs Lvs Glv Val	Phe Trp Tyr Fad2-D (GA316) IMC129
105	1 The Clu Cus Tle Tur Val Glu Pro	Asp Arg Gln Gly Glu Lys Lys Gly Val	Phe Trp Tyr Fad2-F wt
168	1 Lys Glu Cys Ile Tyr Val Glu Pro	Asp Arg Cln Cly Glu Lys Lys Gly Val	Phe Trp Tyr Fad2-F (TAS15) Q508
108	1 Lvs Glu Cvs Ile Tvr Val Glu Pro	Asp Arg Gln Gly Glu Lys Lys Cly Val	Phe Trp Tyr Fad2-F (GA908) Q4275
- is:	2 230 022 032 020 032		
			Fad2-D wt
	l Asn Asn Lys Leu ter		Fad2-D (GA316) IMC129
	1 Asn Asn Lys Leu ter		rad2-r wt
	1 Asn Asn Lys Leu Ler		Fad2-F (TA515) Q508
	1 Asn Asn Lys Leu ter 1 Asn Asn Lys Leu ter		Fad2-F (GA908) Q4275
114	I ASD ASD DVS Ded Car		